

REMARKS**Amended Claims 1 and 6 are Patentable Over Matos**

By the above amendment, applicants have amended independent claims 1 and 6 to define the invention more particularly and distinctly so as to overcome the technical rejections and define the invention in a patentable manner over the cited prior art. Claims 1 and 6 were rejected under 35 U.S.C. § 102 as being anticipated by Matos. As amended, claims 1 and 6 are no longer anticipated by Matos.

Matos' system retrieves package components in response to a request from a user, and following the selection of a best package component from the retrieved package components, a listing of packages matching the best package component is returned to the user. Applicants' system, on the other hand, serves an entirely different purpose. Rather than retrieving travel information as a result of a user's request, applicants' system anticipates future requests from users and retrieves travel information that users are likely to request in the future. Matos focuses on how to best satisfy user requests for travel information, whereas applicants focus on the prefetching of travel information from travel suppliers.

Applicants wish to point out that Matos does not perform or even consider the use of prefetching, which is the cornerstone of applicants' system. Claims 1 and 6 both explicitly refer to prefetching, so Matos does not anticipate applicants' invention. Although prefetching is used in other contexts, such as link prefetching in Web browsers (http://en.wikipedia.org/wiki/Link_prefetching), instruction prefetching in microprocessors (http://en.wikipedia.org/wiki/Instruction_prefetch) and prefetching in Web proxies (<http://packages.debian.org/unstable/web/squid-prefetch>), it has never been applied to the retrieval of travel information or any other related information.

A Google search of "define:prefetching" returns two definitions for the term "prefetching" (the first relates to instruction prefetching in microprocessors, whereas the second relates to link prefetching in Web proxies):

- 1) The moving of data from memory to cache in anticipation of future accesses by the processor to the data, so as to hide memory latency
- 2) Caches web objects in anticipation of users' future needs

The definition of "prefetching" always relates to the retrieval and storage of data in anticipation of future needs. Matos, however, does not anticipate future needs of users (instead, he only retrieves data to

satisfy current needs, and may possibly reuse the retrieved data later – but no anticipation occurs, whatsoever).

In addition to using the term “prefetching” (which applicants consider to be well known to one having ordinary skill in the art), amended claims 1 and 6 explicitly state that travel information is retrieved for the purpose of satisfying future requests from users, rather than satisfying a current/existing request. They further specify that the system prefetches the information that is most likely to be needed in order to satisfy such future requests. Amended claims 1 and 6 are novel with respect to Mathos (and all other prior art) because:

- (1) Nowhere does Matos suggest that travel information is prefetched, or retrieved in anticipation of and for the purpose of satisfying future requests from users. For example, in paragraph 48 Matos specifies that *“travel identification and purchasing is initiated when a client device sends a package query via a Web page”* and that *“Once the travel server receives the package query, it then queries the lodging, car and add-on servers and sends out a flight availability query to the computer reservation system”*. Throughout his description and figures, Matos repeats that travel information is retrieved from the travel suppliers only as a result of a user’s query.

In paragraph 54 Matos specifies that the package service routine begins when a package query is received (typically from the user, but possibly from other external sources). Applicants’ amended claims 1 and 6 clearly differ from Matos in that travel information is prefetched in anticipation of future requests and not in response to an external query.

Applicants’ amended claim 1 explicitly states that travel information is (a) prefetched in anticipation of future user requests, and (b) is not yet needed for responding to any existing requests from users. Furthermore, clause 4 of amended claim 1 states that the cache is created to have a high probability of containing the travel information that **will be needed for future requests**. This approach is also not considered at all by Matos.

Applicants’ amended claim 6 also explicitly states that travel information is prefetched in anticipation of future user requests. In addition, it states that the queries sent to the travel suppliers are selected based on the system’s anticipation of future needs, which is clearly completely different from Matos because Matos selects queries to travel suppliers based on the specific query received from a user of the system.

Appn. Number 10/714,635 (Shiran et al.) Amnt. A contd.

7 of 9

- (2) Although Matos suggests that travel information retrieved from travel suppliers should be cached, Matos only caches travel information in response to a user's query in order to avoid having to retrieve the same travel information again if the user wishes to make changes to his query. Matos utilizes a cache only within the context of a single user session, so it is safe to assume that this is a short-lived cache. In paragraph 54 Matos indicates that:

"If in the following decision block 715 it is determined that the entity querying for packages wishes to make changes, in this case the consumer, then in block 720 specific changes to the components desired in the list of packages will create a new listing of updated packages. As combinations of components have been cached from the package search retrieved in subroutine 800, it will usually not be necessary to search for new packages again."

In paragraph 56 Matos further indicates that package search subroutine is only called in response to a new package query or a change in the details of a package query:

"The package search subroutine 800 is called each time the package service 700 needs to gather a new set of available components with real-time prices based on a new package query or a change in the details of a package query..."

Applicants' amended claims 1 and 6 clearly indicate that the cache is populated in anticipation of future queries from users and not based on a specific query for a package (or any other service) that was received by the system. In addition, applicants populate the cache with travel information for the purpose of satisfying future requests from potentially many different users. As described above, Matos only utilizes caching within the context of a single user's session, for the purpose of reducing the overall number of requests that must be made to external travel suppliers during that user's session.

Applicants also submit that the novel features of claims 1 and 6 are unobvious and hence patentable under § 103 since they produce new and unexpected results over Matos. These new and unexpected results are the ability of applicants' system to maintain a local cache of travel information that is relevant, with high probability, to travel information that the system's users require. The comprehensive cache provides many advantages, including faster responses to user requests. Furthermore, the comprehensive cache enables the system to consider many options prior to receiving users' requests, so that the system can provide high quality responses to such requests when they are received.

The Dependent Claims are a Fortiori Patentable Over Matos

Dependent claims 2, 3, 4 and 5 incorporate all the subject matter of amended claim 1 and add additional subject matter which makes them a fortiori and independently patentable over Matos.

Dependent claims 7, 8, 9, 10, 11 and 12 incorporate all the subject matter of amended claim 6 and add additional subject matter which makes them a fortiori and independently patentable over Matos.

Claims 5 and 11 are patentable over Matos not only because they incorporate all the subject matter of amended claims 1 and 6, but also because Matos does not suggest that travel agents would use the system. The online computer reservation system specified in the O.A. actually provides travel information to Matos' system rather than requesting travel information from the system, as a user. This is shown in Figures 2, 6a, 6b and 6c. Computer reservation system, or CRS, is synonymous with global distribution system, or GDS, which is also specified in applicants' invention as a potential supplier of travel information, rather than a consumer of travel information (a user would herein be considered a consumer of travel information). The O.A. also refers to Matos' Figure 13. Although Figure 13 does indeed mention "reservation agents", it does so in a different context. The user of Matos' system is encouraged to call a reservation agent if he is unable to reserve the package online, but this does not suggest that the agent would use the system (it is unlikely that the agent would do so, since at this stage the user has already been presented with the matching packages).

The justification in the O.A. for rejecting claims 4 and 10 was similar to the justification for rejecting claims 5 and 11. Claims 4 and 10 are patentable over Matos not only because they incorporate all the subject matter of amended claims 1 and 6, but also for the same reason provided above.

Dependent Claim 13 is Patentable Over Matos and Schiff

Dependent claim 13 incorporates all the subject matter of amended claim 6 and adds additional subject matter which makes it a fortiori and independently patentable over Matos. Claim 13 is also novel in view of Schiff. Schiff examines a customer's history of reservations for the purpose of recommending cruises that are more suitable for the customer. Applicants utilize users' history of reservations for a completely different purpose, which is made clear in connection with claim 6, on which claim 13 is dependent. They utilize users' history to decide what travel information the users are most likely to need in the future. Also note that Schiff evaluates only single user's history, whereas applicants' utilize the collective history of all users of the system.

Appn. Number 10/714,635 (Shiran et al.) Amnt. A contd.

9 of 9

CONCLUSION

For all of the above reasons, applicants submit that all claims now define patentably over the prior art. Therefore they submit that this application is now in condition for allowance, which action they respectfully solicit.

Conditional Request for Constructive Assistance

Applicants have amended the specification and claims of this application so that they are proper, definite and define novel structure which is also unobvious. Applicants are no longer represented by a patent attorney. Therefore, if for any reason this application is not believed to be in full condition for allowance, Applicants respectfully request the constructive assistance and suggestion of the Examiner pursuant to § M.P.E.P 2173.02 and 707.07 (j) in order that the undersigned can place this application in allowable condition as soon as possible and without the need for further proceedings.

Very respectfully,

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